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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,803	03/31/2004	Yen-Shuo Liao	1671-0291	7541
28078	7590	07/13/2006	EXAMINER	
MAGINOT, MOORE & BECK, LLP CHASE TOWER 111 MONUMENT CIRCLE SUITE 3250 INDIANAPOLIS, IN 46204			GOINS, DAVETTA WOODS	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 07/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,803

Applicant(s)

LIAO ET AL.

Examiner

Davetta W. Goins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-17 and 19-21 is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 12-17 and 19-21 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:
Although Ishikawa et al. disclose a sensor ball 110 used within a prosthetic 300 for sensing a specific parameter and capable of transmitting the information to a central unit, he nor any other prior art of record disclose in their entirety or in combination the claimed system for sensing a condition within a mammalian joint comprising an endoprosthesis configured to replace a portion of the joint, the body including a wire channel supporting the sensor and transmitter.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. (US Pat. 6,447,448 B1).

In reference to claims 1, Ishikawa discloses a) the claimed body configured to replace a portion of a mammalian joint, which is met by a prosthetic 300 having a joint member 302 which

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rotatably couples to socket member 304 (Figure 3), b) the claimed at least one sensor supported by said body, said sensor adapted to sense an ambient condition of the mammalian joint and to generate a condition signal indicative of the sensed condition, which is met by sensor 160 used to detect physical parameters such as pressure, movement, temperature and the like (col. 8, lines 1-21), and c) the claimed transmission element connected to said sensor to receive said condition signal and operable to transmit a signal indicative of said condition signal, which is met by rf transmitter 150 used to transmit sensed condition signals to a remote station 200 (col. 5, lines 44-67; Figure 2). Although Ishikawa does not disclose the claimed one sensor supported by a first component of the body and a transmission element supported by a second component of the body, he does disclose a ball sensor 110 that includes a sensor 160, a CPU 140 and a transmitter/receiver 150 that can be implanted in bone, ligaments, and cartilage to sense pressure, tensile strength, strain, position, and compression conditions associated with prosthetics and surgically implanted devices (col. 4, lines 57-67; col. 5, lines 1-43; Figures 3-8). The sensing device is capable of sensing temperature and/or other parameters of interest regarding the implant and is capable of transmitting the information upon being interrogated by an outside control station (Figure 2). Since Ishikawa discloses the teaching of placing the device that has the same components as the claimed sensor and transmission element located in one area of the joint, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the components separable and located in different areas of the endoprosthesis as a design that will allow one for making each element removable.

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In reference to claim 2, Ishikawa discloses the claimed sensor is a temperature sensor and the ambient condition is temperature, which is met by sensor 160 used to detect physical parameters such as pressure, movement, temperature and the like (col. 8, lines 1-21).

In reference to claims 3, 5, Ishikawa discloses the claimed sensor is a pH sensor and the ambient condition is pH, which is met by the sensor 160 shown in FIG. 4A is readily adaptable by suitable reconfiguration to sense other physiological parameters such as pH, chemical parameters, and variables as described previously, and physical parameters such as pressure, movement, temperature and the like (col. 8, lines 1-21).

In reference to claim 4, Ishikawa discloses the claimed sensor is configured to determine the presence of a biological material transducer(s) 160 are fabricated on or near the surface of the ball 110 where exposure to a portion of a biological medium in which a parameter is to be sensed or affected by an actuator is better accommodated (col. 4, lines 57-67; col. 5, lines 1-19).

In reference to claim 6, Ishikawa discloses the claimed component of a joint prosthesis selected from the group of a hip prosthesis, a knee, prosthesis, a shoulder prosthesis and an elbow prosthesis, which is met by the sensor balls used in conjunction with an artificial hip joint implant (col. 8, lines 44-52).

In reference to claim 8, Ishikawa discloses the claimed transmission element includes a transmitter supported by said body and configured to transmit a signal to a receiver located

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outside the joint indicative of said condition signal, which is met by RF transmitter 150 transmitting a signal 251 to external device 200 (Fig. 2).

In reference to claims 9, 10, Ishikawa discloses the claimed transmission element includes an antenna and a power source providing power to said antenna, which is met by device 110 including a power coil 120 and power regulator 130 and RF transmitter 150 (Fig. 2).

In reference to claim 11, Ishikawa discloses the claimed power source is a passive power source, which is met by the power transmitter 220 directs low frequency electromagnetic radiation 221 to power and receive signals from the ball 110 (col. 5, lines 44-67; col. 6, lines 1-29).

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. The prior art of record and not relied upon is considered pertinent to the applicant's disclosure as follows. Silver (US Pat. 6,442,413 B1) and Fitz (US Pat. 6,890,303 B2), which disclose implantable devices.

EXAMINER'S NOTE

Regarding the Applicant's argument with respect to the sensor and transmission elements being in different components of the body, it should be noted that it is known to make what's already "integral" to "separate". As stated in MPEP § 2144, if the facts in a prior legal decision are sufficiently similar to those in an application under examination, the examiner may use the rationale used by the court.

Further stated in the MPEP,

"V. MAKING PORTABLE, INTEGRAL, SEPARABLE, ADJUSTABLE, OR
CONTINUOUS.....

C. Making Separable

In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961) (The claimed structure, a lipstick holder with a removable cap, was fully met by the prior art except that in the prior art the cap is "press fitted" and therefore not manually removable. The court held that "if it were considered desirable for any reason to obtain access to the end of [the prior art's] holder to which the cap is applied, it would be obvious to make the cap

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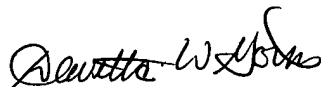
removable for that purpose.”).

As for the “array” or “cluster” of balls, Ishikawa only teaches this array as an alternative embodiment and not the “sole” use of the implant sensor ball (col. 5, lines 20-31; Figures 5, 9-11).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davetta W. Goins whose telephone number is 571-272-2957. The examiner can normally be reached on Mon-Fri with every other Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Daniel Wu can be reached on 571-272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



D.W.G.
July 7, 2006

Davetta W. Goins
Primary Examiner
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